

Delivering superior data quality and sampling flexibility for materials characterization



LAMBDA 1050

PerkinElmer's LAMBDA™ Series UV/Vis/NIR and UV/Vis Spectrophotometers have consistently offered best-in-class accuracy, precision and reproducibility to scientists for nearly 50 years.

No matter what your industry – from optical coatings to chemicals to glass – and whether you need to analyze optics, flat-panel displays or semiconductors – our instruments have become the standard for sampling flexibility and superior data quality in thousands of laboratories globally. Building on this tradition of excellence, the innovative LAMBDA range confirms our leadership in high-performance UV/Vis/NIR and UV/Vis spectroscopy.

The LAMBDA 1050

The innovative LAMBDA 1050 redefines material testing analysis as the only spectrophotometer to offer optimum sensitivity, flexibility and accuracy for the most difficult analysis across the entire operating range – from 175 to 3,300 nm.

Features and Benefits

- An innovative 3-detector transmission module featuring photomultiplier, Indium Gallium Arsenide (InGaAs) and lead sulphide (PbS) detectors for ultra high-performance across the whole operating range
- High-performance 150 mm, 60 mm integrating spheres with PMT and InGaAs detectors, for higher performance diffuse transmittance and diffuse reflectance measurements
- High-performance Universal Reflectance Accessory (URA) with dual Si and InGaAs detectors for high-accuracy specular reflectance measurements
- A suite of performance improvements, including the highest available photometric range and linearity and lowest photometric noise

The LAMBDA Series

The LAMBDA range offers a choice of state-of-the-art spectrophotometers featuring innovative, quick-change, intelligent accessories, along with the industry's broadest range of sampling tools and software solutions.

PerkinElmer's unique accessories, for example the URA and the range of integrating spheres, dramatically simplify a variety of challenging analyses.

Description	Wavelength Range
LAMBDA 1050 Ultra High-performance UV/Vis/NIR Target Applications: Optics, Optical Coatings, Electronics, Displays, Glass and Filters	175 – 3,300 nm (3-detector)
LAMBDA 950 High-performance UV/Vis/NIR Target Applications: Optics, Optical Coatings, Electronics, Displays, Glass, Academia, Non-optical Coatings and Materials Science	175 – 3,300 nm (2-detector)
LAMBDA 850 High-performance UV/Vis Target Applications: Non-optical Coatings, Color, Pharmaceuticals and Materials Science	175 – 900 nm
LAMBDA 750 UV/Vis/NIR Target Applications: Academia, Chemistry, Routine Materials Science Applications, Color, Paints, Coatings and Polymers	190 – 3,300 nm
LAMBDA 650 UV/Vis Target Applications: Academia, Chemistry, Routine Materials Science Applications, Pharmaceuticals, Biosciences, Color and Textiles	190 – 900 nm



The LAMBDA Series features unique dual sample compartments for maximum flexibility.

Deuterium and Tungsten Source Lamps

PerkinElmer's long-lifetime deuterium and tungsten source lamps provide the best wavelength coverage across the working range of the spectrometer for consistently high performance. All lamps are pre-aligned and can be easily changed by the user. Our extensive quality control and inspection process demands the very best quality sources to provide high sensitivity and stability for your key measurements.

Calibration Reference Materials

PerkinElmer reference materials provide fast and accurate calibration verification for UV/Vis and UV/Vis/NIR spectrometers. A comprehensive range of certified traceable filters and sealed cells allow users to verify ordinate and abscissa accuracy, measure stray light and check spectral resolution. All reference materials are certified traceable to NIST primary reference material, and are supplied with a certificate detailing the calibration method and results.



Photometric and Wavelength Accuracy Reference Material Set

Secondary Reference Material Sets

Photometric and Wavelength Accuracy Set

The set includes three neutral density glass filters for checking ordinate accuracy and a holmium glass filter for verification of the wavelength accuracy. Each filter has a unique identification number and the ordinate and abscissa values of each filter are quoted in the accompanying Certificate of Calibration.

Part No.

B0507805

Stray Light Solutions Set

The set includes sealed sodium iodide, sodium nitrite and potassium chloride solutions, which act as cut-off filters with very precise wavelengths. Also included is a sealed water reference.

Part No.

B2500099

Pharmacopoeia Solutions Set

Set of sealed cells to verify calibration in accordance with Pharmacopoeia monographs.

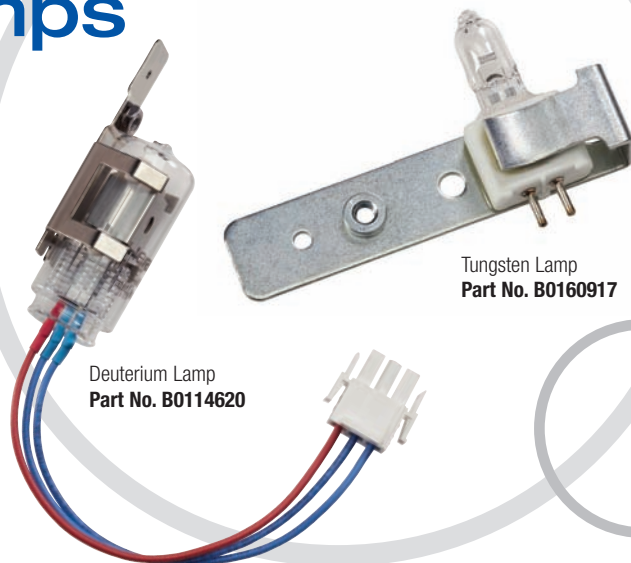
- Ordinate (photometric) accuracy; potassium dichromate
- Abscissa (wavelength) accuracy; holmium perchlorate
- Level of stray radiation; potassium chloride
- Resolution; toluene in hexane

Also included are two sealed reference solutions.

Part No.

B2500100

All Secondary Reference Materials are supplied in robust aluminum containers with an accompanying Certificate of Calibration. All cells are designed to fit into the standard 10 mm cuvette holders of most UV/Vis and UV/Vis/NIR spectrophotometers.



Deuterium Lamp
Part No. B0114620

Tungsten Lamp
Part No. B0160917

Source Lamps for LAMBDA Spectrophotometers

Deuterium Lamps

LAMBDA Model	Part No.
For LAMBDA 1/3	C0550505
For LAMBDA 1X/2X/3X/4X/5X/5XX/Bio/6XX/8XX/9XX	B0160917
For LAMBDA 4/6	C6880055

Tungsten Lamps

LAMBDA Model	Part No.
For LAMBDA 1/3*	C0550500
For LAMBDA 1X/2X/3X/4X/Bio/6XX/8XX/9XX	B0114620
For LAMBDA 4/6*	C6880054
For 5X/5XX	B0091906

*Prefocused and prealigned.

For a full listing of Color Standards and Reflectance Reference Materials, please visit:
www.perkinelmer.com/uvsupplies

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ORDER TODAY

High Quality Precision Cells for Every

Make full use of the **accuracy** and **sensitivity** of your **optical instrument**

PerkinElmer Cells Ensure Top Optical Performance, with High Cell Transmission and Accurate Pathlength

No matter what type of cells your application requires – rectangular or cylindrical, standard or short path, micro, semi-micro or flowcells – choosing only high quality, precision cells allows you to make full use of the accuracy and sensitivity of your optical instrument.

The cell windows are fused to the bodies by a special process which avoids deformation of the windows. This assures that the full width of the cell is usable and the finished cell dimensions are maintained.

Our cells are manufactured from various types of glass. We offer three basic materials: Special Optical Glass, SUPRASIL® UV Quartz and SUPRASIL 300 NIR Quartz, in all the common sizes and types. The most important criterion for the choice of a particular type of glass is the spectral range for which the cell is intended. Color logos are fused onto each PerkinElmer cell, thus indicating the spectral range over which the cell can be used.

Standard rectangular macro cells are the most frequently-used type of spectroscopy cell for routine liquids analysis. Each cell has a standard inside width of 9.5 mm and a base thickness of 1.5 mm. All macro cells contain two clear windows.



NIR Quartz Macro with PTFE Lid

NIR Quartz Macro with PTFE Stopper

Special Optical Glass

Indicates that SCHOTT type UK 5 is used for cells referred to in the catalog as manufactured from “Special Optical Glass”. This crown glass is made from exceptionally pure raw materials, which gives an improved transmission in the near ultraviolet range. An empty cell will give a transmission of more than 80% over a spectral range of between 320 and 2,500 nm.

SUPRASIL UV Quartz

Indicates that quartz of the highest purity and homogeneity has been used for the window. Because it is produced from a silicon compound, it is also called synthetic quartz. SUPRASIL gives transmission values of more than 80% over a spectral range of between 200 and 2,500 nm for an empty cell.

SUPRASIL 300 NIR Quartz

Denotes a synthetic quartz that is free from OH absorption. Therefore it is suitable for applications in the near infrared range up to approximately 4,000 nm. SUPRASIL 300 gives a transmission of more than 80% over a spectral range of between 200 and 3,500 nm for an empty cell.

Macro with PTFE Lid

Lightpath	Outside Dim. H x W x D mm	Cell Volume	Qty.	Part No.
NIR Quartz SUPRASIL® 300				
1 mm*	45 x 12.5 x 3.5	350 µL	2	B0631013
5 mm	45 x 12.5 x 7.5	1.75 mL	2	B0631014
10 mm	45 x 12.5 x 12.5	3.5 mL	2	B0631015
20 mm	45 x 12.5 x 22.5	7.0 mL	2	B0631016
50 mm	45 x 12.5 x 52.5	17.5 mL	1	B0631017
100 mm	45 x 12.5 x 102.5	35.0 mL	1	B0631018
Optical Glass 360-2,500 nm without lid				
10 mm	45 x 12.5 x 12.5	3.5 mL	4	B0631134
Quartz SUPRASIL				
1 mm*	45 x 12.5 x 3.5	350 µL	2	B0631007
5 mm	45 x 12.5 x 7.5	1.75 mL	2	B0631008
10 mm	45 x 12.5 x 12.5	3.5 mL	2	B0631009
20 mm	45 x 12.5 x 22.5	7.0 mL	2	B0631010
50 mm	45 x 12.5 x 52.5	17.5 mL	1	B0631011
100 mm	45 x 12.5 x 102.5	35.0 mL	1	B0631012
Special Optical Glass				
1 mm*	45 x 12.5 x 3.5	350 µL	2	B0631001
5 mm	45 x 12.5 x 7.5	1.75 mL	2	B0631002
10 mm	45 x 12.5 x 12.5	3.5 mL	2	B0631003
20 mm	45 x 12.5 x 22.5	7.0 mL	2	B0631004
50 mm	45 x 12.5 x 52.5	17.5 mL	1	B0631005
100 mm	45 x 12.5 x 102.5	35.0 mL	1	B0631006

*Glass lid.

Application



Quartz SUPRASIL
Micro with PTFE Lid or Stopper

Macro with PTFE Stopper

Lightpath	Outside Dim. H x W x D mm	Cell Volume	Qty.	Part No.
NIR Quartz SUPRASIL 300				
1 mm	52 x 12.5 x 3.5	350 µL	2	B0631031
5 mm	46 x 12.5 x 7.5	1.75 mL	2	B0631032
10 mm	46 x 12.5 x 12.5	3.5 mL	2	B0631033
20 mm	46 x 12.5 x 22.5	7.0 mL	2	B0631034
50 mm	46 x 12.5 x 52.5	17.5 mL	1	B0631035
100 mm	46 x 12.5 x 102.5	35.0 mL	1	B0631036

Quartz SUPRASIL

1 mm	52 x 12.5 x 3.5	350 µL	2	B0631025
5 mm	46 x 12.5 x 7.5	1.75 mL	2	B0631026
10 mm	46 x 12.5 x 12.5	3.5 mL	2	B0631027
20 mm	46 x 12.5 x 22.5	7.0 mL	2	B0631028
50 mm	46 x 12.5 x 52.5	17.5 mL	1	B0631029
100 mm	46 x 12.5 x 102.5	35.0 mL	1	B0631030

Special Optical Glass

1 mm	48 x 12.5 x 3.5	350 µL	2	B0631019
5 mm	46 x 12.5 x 7.5	1.75 mL	2	B0631020
10 mm	46 x 12.5 x 12.5	3.5 mL	2	B0631021
50 mm	46 x 12.5 x 52.5	17.5 mL	1	B0631023

Micro Cells

Micro cells have the same outside dimension as the Macro cells but the cell walls have been thickened, limiting the interior sample chamber width to 2 mm. This reduces the sample requirements by 80%. Each Micro cell has a standard light path of 10 mm and each package contains two cells with two clear windows each. All Micro cells listed have black sidewalls and base.

Micro with PTFE Lid

Outside Dimensions (HxWxD)	Base Thickness	Cell Volume	Part No.
Quartz SUPRASIL®			
45 x 12.5 x 12.5 mm	3.2 mm	700 µL	B0631071
Special Optical Glass			
45 x 12.5 x 12.5 mm	3.2 mm	700 µL	B0631070

Micro with PTFE Stopper

NIR Quartz SUPRASIL 300			
40 x 12.5 x 12.5 mm	1.5 mm	400 µL	B0631078
Quartz SUPRASIL			
40 x 12.5 x 12.5 mm	1.5 mm	400 µL	B0631077
Special Optical Glass			
40 x 12.5 x 12.5 mm	1.5 mm	400 µL	B0631076

For a full listing of Spectroscopy Cells, Lids, Stoppers and Tubing, please visit:
www.perkinelmer.com/uvsupplies

Semi-micro Cells

Semi-micro cells have the same outside dimension as the Macro cells but the cell walls have been thickened slightly, limiting the interior sample chamber width to 4 mm. This reduces the sample requirements by 60%. Each cell has a base thickness of 3.2 mm and each package contains two cells with two clear windows each.



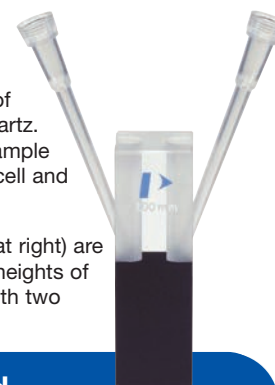
Semi-micro with PTFE Lid – Black

Outside Dimensions (HxWxD)	Lightpath	Cell Volume	Part No.
NIR Quartz SUPRASIL 300			
45 x 12.5 x 7.5 mm	5 mm	700 µL	B0631050
45 x 12.5 x 12.5 mm	10 mm	1.4 mL	B0631051
Quartz SUPRASIL			
45 x 12.5 x 7.5 mm	5 mm	700 µL	B0631048
45 x 12.5 x 12.5 mm	10 mm	1.4 mL	B0631049
Special Optical Glass			
45 x 12.5 x 7.5 mm	5 mm	700 µL	B0631046
45 x 12.5 x 12.5 mm	10 mm	1.4 mL	B0631047

Ultra-micro Cells

Ultra-micro cells use a narrower sample chamber, raising it directly into the center of the light path and masking it with black quartz. This design optimizes the use of smaller sample volumes. All Ultra-micro cells contain one cell and two clear windows.

Ultra-micro cells with Pipette Tips (shown at right) are available in Quartz SUPRASIL with center heights of 15 mm. Each package contains one cell with two clear windows.



Ultra-micro with PTFE Lid

Outside Dim. (HxWxD mm)	Lightpath	Aperture	Chamber Volume	Filling Volume	Part No.
Quartz SUPRASIL					
45 x 12.5 x 12.5	10 mm	2 x 1.5 mm	30 µL	50 µL	B0631079

Ultra-micro with Pipette Tips

Quartz SUPRASIL					
40 x 12.5 x 12.5	0.1 mm	1 x 5 mm	0.5 µL	2 µL	B0631082
40 x 12.5 x 12.5	1 mm	1 x 5 mm	5 µL	10 µL	B0631083
45 x 12.5 x 12.5	5 mm	Ø 0.8 mm	2.5 µL	5 µL	B0631080
40 x 12.5 x 12.5	10 mm	Ø 0.8 mm	5 µL	10 µL	B0631081



Macro, Semi-micro and Micro UV disposable cells for convenient, cost effective spectroscopy



Disposable cells greatly reduce the risk of contamination, remove the need for cleaning reagents and lower laboratory costs as compared to quartz or glass cells.

Disposable cells are available in polystyrene and polymethyl methacrylate either as macro or semi-micro cells. Additionally, disposable cells are available in a special UV transparent material in micro, semi-micro and micro cells. The useful spectral range for UV Material is between 220 and 900 nm, for polymethyl methacrylate it is 300 and 900 nm and for polystyrene it is 340 and 900 nm.

Each cell has a standard light path of 10 mm and is suitable for any UV/Vis Spectrophotometer which accommodates cells with a center height of 15 mm.

Color coded caps can be ordered for the micro UV transparent cells which allow samples to be stored down to -20 °C.

Macro Cells

Description	Outside Dimensions	Cell Volume	Qty.	Part No.
UV Material	45 x 12.5 x 12.5 mm	2.5 – 4.5 mL	100	L7110269
Polystyrene	45 x 12.5 x 12.5 mm	2.5 – 4.5 mL	1000	L7110271
Polymethyl Methacrylate	45 x 12.5 x 12.5 mm	2.5 – 4.5 mL	1000	L7110273

Micro Cells



Description	Outside Dimensions	Cell Volume	Qty.	Part No.
UV Material	45 x 12.5 x 12.5 mm	70 – 550 µL	100	L7110260
	45 x 12.5 x 12.5 mm	70 – 550 µL	500	L7110261
UV Material	45 x 12.5 x 12.5 mm	70 – 550 µL	100	L7110262
Individually Wrapped*				
Caps - Blue			100	L7110264
Caps - Yellow			100	L7110265
Caps - Green			100	L7110266
Caps - Orange			100	L7110267

* Free of DNase, DNA and RNase

Cell Rack

Also available is a cell rack for easy storage of samples. It is suitable for standard 10 mm light path cells and holds up to 16 cells in numbered positions to aid sample tracking. The cell rack can withstand temperatures up to 121 °C so it can be used in an Autoclave.

Description	Qty.	Part No.
Cell Rack, 16 cell capacity	1	L7110275



Semi-micro Cells

Description	Outside Dimensions	Cell Volume	Qty.	Part No.
UV Material	45 x 12.5 x 12.5 mm	1.5 – 3.0 mL	100	L7110268
Polystyrene	45 x 12.5 x 12.5 mm	1.5 – 3.0 mL	1000	L7110272
Polymethyl Methacrylate	45 x 12.5 x 12.5 mm	1.5 – 3.0 mL	1000	L7110274

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Save on **UV Disposable Cells**
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Versatile cell holders

to maximize sampling **flexibility**



Cylindrical Long-path Cell Holder



Solid Sample Holder

To extend the range of samples that you can analyze, we offer a wide range of sample holders.

The rectangular and cylindrical long-path cell holders are ideal for sensitive measurements on dilute samples where the extra pathlength is important. For the chemist, the test-tube holder provides a convenient method of sampling in-situ without having to decant the sample into standard cells.

Finally, extend your measurement capabilities to include solid materials with the solid and variable-angle sample holders.

Solid Sample Holder

Minimum sample size 10 x 15 mm. Maximum sample thickness 5 mm.

Part No.

B0080822

Test Tube Holder

This holder accommodates test tubes from 11 to 17 mm diameter.

Part No.

B0500952

Variable Angle Sample Holder

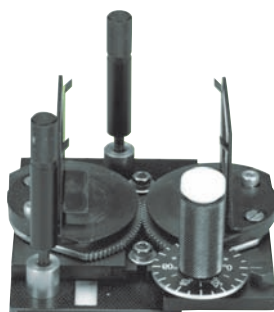
0° to 60° for sample position for measurement in transmission of filter glasses and other transparent samples. Minimum sample size is 30 x 40 mm.

Part No.

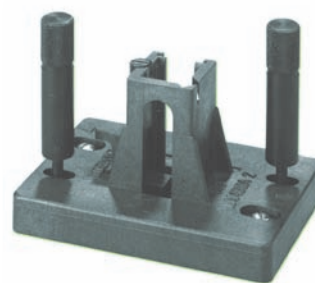
B0152471



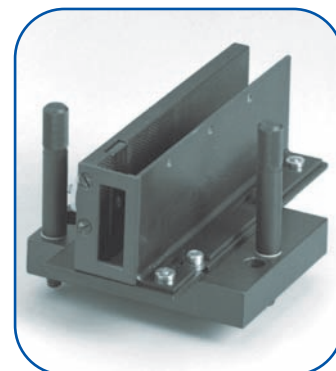
Test Tube Holder



Variable Angle Sample Holder



Standard Cell Holder



Rectangular Long-path Cell Holder

Cell Holders

Standard Cell Holder

The Standard Cell Holder is provided as standard equipment with your PerkinElmer LAMBDA Series instrument. A lifter (included) makes short cell removal easy. It accommodates a large selection of rectangular cells up to 10 mm pathlength. The Standard Cell Holder is adjustable both vertically and horizontally.

Part No.

B0505071

Rectangular Long-path Cell Holder

The Rectangular Long-path Cell Holder accepts cells with pathlengths from 10 to 100 mm. This optional cell holder is easy to install and has the same footprint as the Standard Cell Holder. It is designed for a precise fit and gives you maximum reproducibility.

Description

For LAMBDA 1X/2X/3X/4X/Bio

Part No.

B0080821

Cylindrical Long-path Cell Holder

The Cylindrical Long-path Cell Holder accommodates cells with outside diameters from 22 to 30 mm. A versatile cell holder, it accepts cells with pathlengths up to 100 mm. The spring loaded clamping arms provide a precise, reproducible fit and are easy to adjust.

Part No.

C0550303

For a full listing of Spectroscopy Cells, Lids, Stoppers and Tubing, please visit: www.perkinelmer.com/uvsupplies



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ORDER TODAY

Cell changers for higher productivity



8+1 Cell Changer

Water-thermostatted 8+1 and 8+8 Cell Changers

8+1 Cell Changer for LAMBDA 25/35/45

Automatic Water-thermostattable Linear Cell Changer for eight samples and one reference.

	Part No.
	N1010567

Includes:

	Part No.
Automatic Linear Transport	B2000186
8-Cell Holder, Water-thermostattable	B2205411
Water-thermostattable Reference Cell Holder	B2000201

8+8 Cell Changer for LAMBDA 25/35/45

Automatic Water-thermostattable Linear Cell Changer for eight samples and eight references.

	Part No.
	N1010568

Includes:

	Qty.	Part No.
Automatic Linear Transport		B2000186
Reference Kit		B2000310
8-Cell Holders	2	B2205411

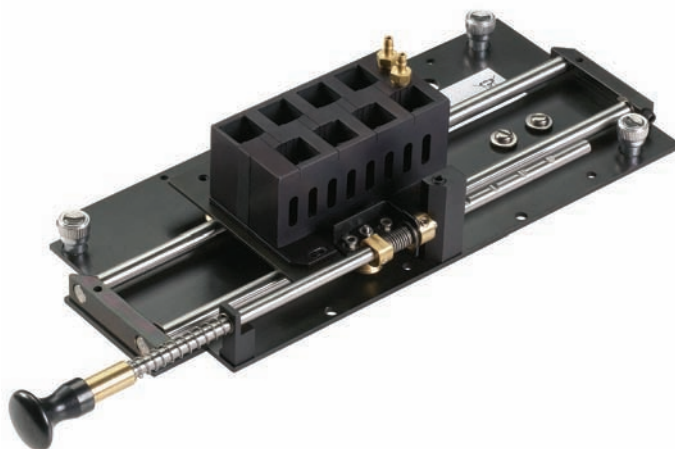
5+5 Cell Changer for LAMBDA 25/35/45

Automatic Linear 5+5 Cell Changer for long pathlength cells up to 50 mm.

	Part No.
	N1010569

Includes:

	Qty.	Part No.
Automatic Linear Transport		B2000186
Reference Kit		B2000310
Long Pathlength 5-Cell Holder	2	B0089439



Manual Cell Changer with Water-thermostatted 8-Cell Holder

Manual Cell Changer for LAMBDA 25/35/45

Base unit to be used with cell holder of choice.

	Part No.
	B2500080

Includes:

	Part No.
Accessory Cover	B0094014

Requires one of the following (not included):

	Part No.
Long Pathlength 5-Cell Holder or	B0089439
8-Cell Holder, Water-thermostattable	B2500081

13-Cell Changer System

For LAMBDA 25/35/45

Includes cell changer and one carousel each for glass/quartz and plastic cuvettes. Accessory PCB (L6000500) required for LAMBDA 25/35/45, or PCB (B0509681) required for LAMBDA 10/20/40/Bio, but not included.

	Part No.
	B0185210

Thermostating options for **fast, efficient temperature-control**

PTP-A Single-cell Air-cooled Peltier Accessory

The PTP-A Single-cell Peltier Accessory is air-cooled and does not require a source of cooling water, making it very convenient to use with minimal setup time. Temperature programs are set up, edited and stored from the front panel of the controller unit.

The PTP-A is ideal for protein and nucleic assays to 37 °C and for many studies of kinetics, thermodynamics and acid-base equilibria.

Description	Part No.
PTP-A Air-cooled Peltier System	L6310014

Water-thermostatted Single-cell Holder

A single-cell holder with 3 mm fluid tubing connectors to enable fluid circulated temperature stabilization. Can be installed in the reference position with the PTP-1 and PTP-6 to allow the reference sample to be temperature controlled. Requires, but does not include, a fluid circulator.

LAMBDA Model	Part No.
All	B0080819



Temperature-measurement Kit

Temperature-measurement Kit

Probe for measuring the temperature within the cell. Includes glass cell. Requires the LAMBDA 25, 35, 45 Accessory Board (L6000500).

LAMBDA Model	Part No.
25/35/45	B0185227



PTP 1+1 and PTP 6+6 Research Peltier Systems

Research Peltier Range

The research Peltier range of accessories is ideal for any application that requires precise control of temperature at, below or above ambient temperature. The ability to operate up to 100 °C allows applications such as DNA melting, protein denaturation and some polymer studies to be performed.

These new accessories consist of Peltier-controlled, single or six-cell cuvette holders for the sample and reference channels. Single-channel versions are also available. The accessory includes in-cuvette stirring and the ability to preset temperature programs.

The unit requires a source of cooling water.

Description	Part No.
PTP-1 Research Peltier System	L6310010
PTP 1+1 Research Peltier System	L6310012
PTP-6 Research Peltier System*	L6310011
PTP 6+6 Research Peltier System*	L6310013

*For the PTP-6 and 6+6 the sample and reference cell holders must be fitted to the baseplate of the cell changer unit in the sample compartment. In a Lambda 25, 35 or 45 this is the Automatic Linear Transport (B2000186), while in a Lambda 650, 850 or 950 the Linear Cell Programmer (B2205401) is required.



Specular Reflectance Accessories



Specular Reflectance Accessories for LAMBDA 650/750/850/950/1050

The Fully-automated Universal Reflectance Accessory (URA)

PerkinElmer's unique Universal Reflectance Accessory (URA) is the only fully-automated, multi-angle, absolute specular reflectance accessory available today.

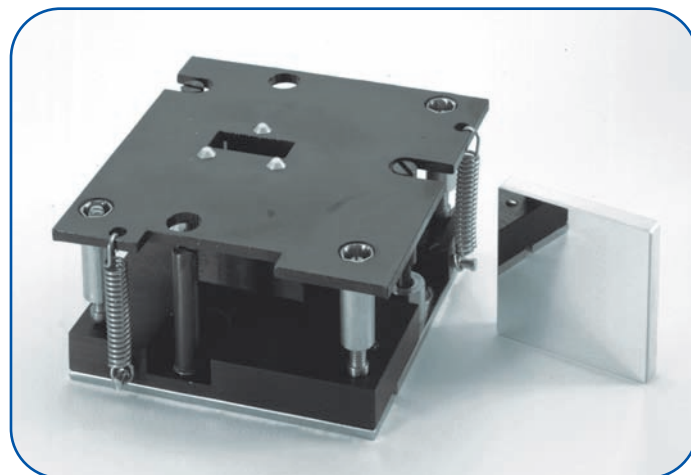
Simply place the sample on the horizontal sampling plate, select the required measurement angles with a few mouse clicks and scan. Unlike traditional methods, the URA automatically and reproducibly changes the measurement angle, eliminating time-consuming manual mirror adjustments and changes of accessory. This approach reduces running costs and increases productivity. The URA snaps into place in the second sampling position and can quickly be interchanged with integrating spheres and other detector modules.

Features and Benefits

- Measurement range: 190 – 3,100 nm (UV/Vis/NIR), 190 – 900 (UV/Vis)
- Angular range: 8 – 68° incident angle
- Depolarization recommended for angles >15°
- Measure separate S&P polarizations using the Double Depolarizer Drive (page 22)
- Absolute and relative measurements can be made
- Typical applications include the measurement of anti-reflection coatings, high-reflectors, coating thickness and metallic reflectors

Description	Part No.
URA* (UV/Vis only)	L6020208
URA* (UV/Vis/NIR)	L6020202
URA (UV/Vis/NIR) for LAMBDA 1050 only	L6020358

Relative Specular Reflectance Accessories



Relative Specular Reflectance Accessory, 6°

Features and Benefits

- Locates in the standard sample compartment for routine relative reflectance measurements at a 6° fixed angle of incidence
- Accommodates samples from 20 x 20 mm to 100 x 100 mm
- Wavelength range: 175 – 3,300 nm
- Choice of angles: 45° and 80° also available*

*See Consumables and Accessories Reference Catalog.

Part No.

B0086703

Variable-Angle Relative Specular Reflectance Accessory

For relative specular reflectance studies which require data from more than one angle of incidence, the variable angle accessory is ideal. The angular range is from 15 to 70° with an accuracy of +/- 1°. Typical applications include the study of the how the reflectivity of a sample changes with change of incident angle.

Features and Benefits

- Wavelength range: 175 – 3,300 nm
- Locates in standard sample compartment
- Uses standard instrument detectors
- Range of angles: 15 – 70°

Part No.

B0137314

Snap-in Integrating Spheres

Accessories for LAMBDA 150 mm Integrating Spheres

For LAMBDA 650/850/950/1050 Integrating Spheres

Center Mounted Sample Holder, Clip Style

Clip style for films and paper samples.

LAMBDA Model	Part No.
6XX/8XX/9XX/10XX	PELA9039

Center Mounted Sample Holder, Jaw Style

Jaw style for solid samples like glasses, prisms, etc.

LAMBDA Model	Part No.
6XX/8XX/9XX/10XX	PELA9038

Cell Holder

For measurement in 1 cm cuvettes in transmission or reflectance mode.

LAMBDA Model	Part No.
6XX/8XX/9XX/10XX	C6951019

Small Spot Accessory Kit

Lens kit for reducing beam size to the transmittance position, to the center mount and to the diffuse reflectance position. Requires Reflectance Aperture Kit, Part No. L6020314.

LAMBDA Model	Part No.
6XX/8XX/9XX/10XX	L6020211

Reflectance Only Small Spot Kit

Lens kit for reducing beam size to the reflectance position. Requires Sample Compartment Iris, Part No. L6020316.

LAMBDA Model	Part No.
6XX/8XX/9XX/10XX	L6020313



150 mm Integrating Sphere

Integrating Spheres for LAMBDA 650/750/850/950/1050 Snap-in Integrating Spheres

PerkinElmer's range of snap-in integrating spheres is the industry standard for the measurement of total reflectance, diffuse reflectance and diffuse transmittance measurements for a huge range of sample types. The 150 mm Integrating Sphere is the recommended accessory for measurement of total solar reflectance and transmittance in the glass industry and for the measurement of UV transmittance of paint films in the automotive industry. Many national laboratories use it in R&D studies and for calibration measurements.

The 60 mm Integrating Sphere is used for routine diffuse reflectance and diffuse transmittance measurements. The detector sphere comprises a 60 mm Spectralon detector sphere contained in a snap-in module which fits into the second sample compartment position. This leaves the primary sample compartment free for the use of accessories such as the V-N absolute reflectance accessories, transmission sample holders and polarizer/depolarizer drive.

Features and Benefits

- Measurement range: 200 – 2,500 nm (UV/Vis/NIR), 200 – 900 (UV/Vis)
- InGaAs versions offer higher sensitivity in the near-IR range
- Sampling modes include total and diffuse reflectance at an incident angle of 8°, and total and diffuse transmittance at normal (0°) incidence

Description	Part No.
150 mm Integrating Sphere*	L6020204
60 mm Integrating Sphere	L6020203
60 mm Detector Sphere*	L6020209
150 mm InGaAs Integrating Sphere*	L6020322
60 mm InGaAs Integrating Sphere*	L6020323

*Not available for the LAMBDA 750.

50 mm Integrating Sphere for LAMBDA 35

Simplifies analysis of a wide variety of samples, including solids, powders, pastes and liquids. For scattered transmittance and diffuse reflectance measurement. Spectralon coated, wavelength range 250 to 1,100 nm.



Part No.
C6951014

Accessories for LAMBDA 35 Integrating Spheres

Description	Part No.
1.25" Calibrated Spectralon Diffuse Reflectance Standard	PELA9057
Powder Sample Holder Set	PELA9040



Polarizers and Depolarizers

for precise transmission and reflectance measurements



Double Polarizer Drive

The Double Polarizer Drive requires, but does not include, one or two of the following polarization elements:

Polarizer/Depolarizer Elements for the Double Polarizer Drive

A range of polarizing materials is available, according to the required wavelength range. For equal energy in the sample and reference beams of the spectrometer, two are required.

Description	Wavelength Range	Part No.
Film Polarizer	400 – 700 nm	B2205022
High Performance Polarizer Crystal	300 – 2,600 nm	B0505284
Glan-Taylor Polarizer Crystal	210 – 1,000 nm	N1010520
Depolarizer Crystal (98% efficiency)	190 – 2,600 nm	B2205021

Double Polarizer drive for LAMBDA 650/750/850/950/1050

When samples are oriented and polarize incident light, it is important to correct for the inherent polarizing effect of the spectrometer's optics by using a depolarizer. Another important application is to make measurements using a specific orientation of incident radiation e.g. for crystalline materials and polymers.

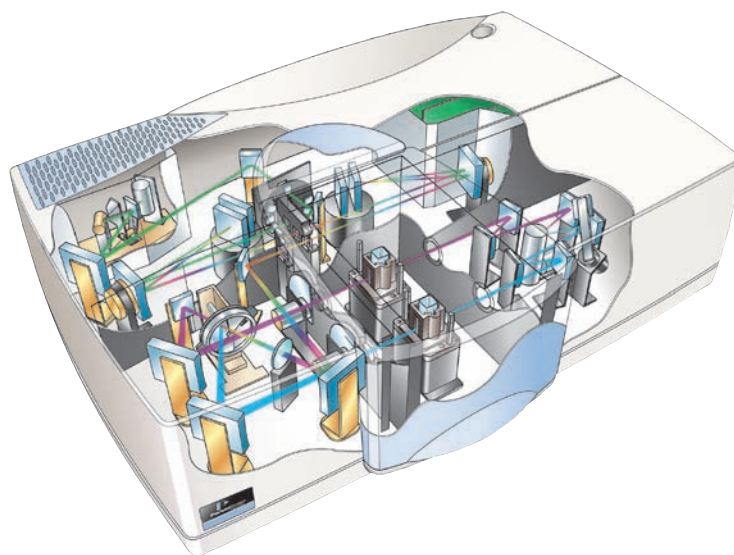
Features and Benefits

- Measurement range (Depolarization): 185 – 2,600 nm
- Measurement range (with Polarizers): 400 – 700 nm (Film), 300 – 2,600 nm (Glan-Thompson), 210 – 1,000 nm (Glan-Taylor)
- Fits into standard sample compartment alongside reflectance accessories and transmittance sample holders
- Suitable for reflectance and transmittance measurements

The high performance Double Polarizer/Depolarizer Drive is installed in the primary sample compartment. The polarization/depolarization orientation can be fully automated, changed by a scan at a fixed wavelength or with a stepping mode. Resolution of 0.25° for scanning. The polarization (depolarization) orientation in the stepping mode can be changed at up to 20 wavelength positions. Applications include specular reflectance studies of optics, coatings, metallic reflectors and thin films. The Double Polarizer Drive can operate with the Universal Reflectance Accessory or manual specular reflectance and transmission accessories.

Part No.

B0505530



The Common-beam Depolarizer is located just before the beam is chopped to create sample and reference beams.

Common-beam Depolarizer

Another approach to depolarization involves the use of a software controlled depolarizer inside the spectrometer. Driven by a stepper drive, and controlled by UV WinLab™ software, the Common-beam Depolarizer operates between 190 and 2,600 nm uses a double-wedge quartz/Suprasil design for 92% depolarization efficiency. Service installation is required.

Part No.

B0501282

Ultra-high precision cells and long-lifetime lamps for Polarimetry

Long Lifetime Source Lamps

High-quality source lamps, specially selected to optimize the performance of all PerkinElmer polarimeters, offer high radiant energy and a long operating lifetime. Their high output ensures that very accurate measurements of optical rotation can be made, even when the sample absorbs strongly.

Description	Polarimeter Model	Part No.
Sodium, 20 W	341/343/343plus/341LC/ 241/241MC/243/243B	B0008754
Mercury Vapor (St46)	341/343S/343plus/341LC	B0510581



Secondary Quartz Standards for Instrument Validation

Quartz control plates provide traceable instrument calibration in the visible spectral range, ensuring the highest standards of accuracy and precision for all measurements. All quartz control plates feature a thermostatable housing.

Description	Nominal Rotation	Part No.
Quartz Control Plate +1	+1° at 589 nm	B0098800
Quartz Control Plate -1	-1° at 589 nm	B0098799

For a full listing of Polarimetry Cells, including Short-path, Beaker and Flow Cells, please visit:
www.perkinelmer.com/posupplies



Standard Cells for Polarimetry

PerkinElmer's polarimetry cells are exclusively manufactured for us, using a special process in which the windows are fused to the cell bodies to ensure that they're free of tension. This eliminates the birefringence effects which are found in conventional designs and can affect the accuracy of your measurements.

Each cell is individually tested and the actual pathlength is engraved on the cell to the nearest 0.01 mm. All cells are jacketed for thermostating and are designed for easy filling and emptying, with no loss of sample. A wide range of cells are available for all applications, including short-pathlength cells, flow cells and micro-cells. Fused silica (quartz) cells are available for measurements in the UV and visible regions, as well as work at temperatures of up to 200 °C. Glass cells can be used at visible wavelengths above 400 nm.

Description	Lightpath	Cell Volume	Part No.
Quartz	100 mm	3.0 mL	B0507403
Quartz	100 mm	6.2 mL	B0041696
Optical Glass	100 mm	3.0 mL	B0507447
Optical Glass	100 mm	6.2 mL	B0041693

Micro Cells

Description	Lightpath	Cell Volume	Part No.
Optical Glass	100 mm	1.0 mL	B0017047

